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Chen, Yao-Tseng

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<213> Homo sapien

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<212> DNA
<213> Homo sapien

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<212> DNA
<213> Homo sapien

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<212> DNA
<213> Homo sapien

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aggcctcctg ataatcgtcc tggccataat cgcaagagag ggcgactgtg cccctgagga 3120
gaaaatctgg gaggagctga gtgtgttaga ggtgtttgag ggagagggaag acagtatctt 3180
gggggatccc aagaagctgc tcacccaaca tttcgtgcag gaaaactacc tggagtaccg 3240
gcaggtcccc ggcagtgatc ctgcatgtta tgaattcctg tggggtccaa gggccctcgt 3300
tgaaaccagc tatgtgaaag tcctgcacca tatggtaaag atcagtggag gacctcacat 3360
ttcctaccca cccctgcatg agtgggtttt gagagagggg gaagagtgag tctgagcacg 3420
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cttagtttcc actgcctcct gtgacgtgag gcccattctt cactctttga agcgagcagt 3540
cagcattctt agtagtgggt ttctgttctg ttggatgact ttgagattat tctttgtttc 3600
ctgttggagt tgttcaaatg ttccttttaa cggatggttg aatgagcgtc agcatccagg 3660
tttatgaatg acagtagtca cacatagtgc tgtttatata gtttaggagt aagagtcttg 3720
ttttttactc aaattgggaa atccattcca ttttgtgaat tgtgacataa taatagcagt 3780
ggtaaaagta tttgcttaaa attgtgagcg aattagcaat aacatacatg agataactca 3840
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aatatgcaaa ccaggatttc cttgacttct ttgagaatgc aagcgaaatt aaatctgaat 3960
aaataattct tcctcttcac tggctcgttt cttttccgtt cactcagcat ctgctctgtg 4020
ggaggccctg ggttagtagt ggggatgcta aggtaagcca gactcacgcc tacccatagg 4080

gctgtagagc ctaggacctg cagtcatata attaaggtgg tgagaagtcc tgtaagatgt 4140

agaggaaatg taagagaggg gtgagggtgt ggcgctccgg gtgagagtag tggagtgtca 4200

gtgc 4204

<210> 15
<211> 752
<212> DNA
<213> Homo sapien

<400> 15
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ccgaaggccg gggcacaggg ggttcgacgg gcgatgctga tggcccagga ggccctggca 120

ttcctgatgg cccaggggggc aatgctggcg gcccaggaga ggcgggtgcc acgggcggca 180

gaggtccccg gggcgcaggg gcagcaaggg cctcggggcc gggaggaggc gccccgcggg 240

gtccgcatgg cggcgcggct tcagggctga atggatgctg cagatgcggg gccaggggggc 300

cggagagccg cctgcttgag ttctacctcg ccatgccttt cgcgacaccc atggaagcag 360

agctggcccg caggagcctg gcccaggatg ccccaccgct tcccgtgcca ggggtgcttc 420

tgaaggagtt cactgtgtcc ggcaacatac tgactatccg actgactgct gcagaccacc 480

gccaactgca gctctccatc agctcctgtc tccagcagct ttccctgttg atgtggatca 540

cgcagtgctt tctgcccgtg tttttggctc agcctccctc agggcagagg cgctaagccc 600

agcctggcgc cccttcctag gtcatgcctc ctcccctagg gaatggtccc agcacgagtg 660

gccagttcat tgtgggggcc tgattgtttg tcgctggagg aggacggctt acatgtttgt 720

ttctgtagaa aataaaactg agctacgaaa aa 752

<210> 16
<211> 1967
<212> PRT
<213> Homo sapiens

<400> 16

Leu Glu Phe Lys Ile Ser Asp Glu Glu Ala Asp Asp Ala Asp Ala Ala
1 5 10 15

Gly Arg Asp Ser Pro Ser Asn Thr Ser Gln Ser Glu Gln Gln Glu Ser
20 25 30

Val Asp Ala Glu Gly Pro Val Val Glu Lys Ile Met Ser Ser Arg Ser
35 40 45

Val Lys Lys Gln Lys Glu Ser Gly Glu Glu Val Glu Ile Glu Glu Phe
50 55 60

Tyr Val Lys Tyr Lys Asn Phe Ser Tyr Leu His Cys Gln Trp Ala Ser

65 70 75 80

Ile Glu Asp Leu Glu Lys Asp Lys Arg Ile Gln Gln Lys Ile Lys Arg
85 90 95

Phe Lys Ala Lys Gln Gly Gln Asn Lys Phe Leu Ser Glu Ile Glu Asp
100 105 110

Glu Leu Phe Asn Pro Asp Tyr Val Glu Val Asp Arg Ile Met Asp Phe
115 120 125

Ala Arg Ser Thr Asp Asp Arg Gly Glu Pro Val Thr His Tyr Leu Val
130 135 140

Lys Trp Cys Ser Leu Pro Tyr Glu Asp Ser Thr Trp Glu Arg Arg Gln
145 150 155 160

Asp Ile Asp Gln Ala Lys Ile Glu Glu Phe Glu Lys Leu Met Ser Arg
165 170 175

Glu Pro Glu Thr Glu Arg Val Glu Arg Pro Pro Ala Asp Asp Trp Lys
180 185 190

Lys Ser Glu Ser Ser Arg Glu Tyr Lys Asn Asn Asn Lys Leu Arg Glu
195 200 205

Tyr Gln Leu Glu Gly Val Asn Trp Leu Leu Phe Asn Trp Tyr Asn Met
210 215 220

Arg Asn Cys Ile Leu Ala Asp Glu Met Gly Leu Gly Lys Thr Ile Gln
225 230 235 240

Ser Ile Thr Phe Leu Tyr Glu Ile Tyr Leu Lys Gly Ile His Gly Pro
245 250 255

Phe Leu Val Ile Ala Pro Leu Ser Thr Ile Pro Asn Trp Glu Arg Glu
260 265 270

Phe Arg Thr Trp Thr Glu Leu Asn Val Val Val Tyr His Gly Ser Gln
275 280 285

Ala Ser Arg Arg Thr Ile Gln Leu Tyr Glu Met Tyr Phe Lys Asp Pro
290 295 300

Gln Gly Arg Val Ile Lys Gly Ser Tyr Lys Phe His Ala Ile Ile Thr
305 310 315 320

Thr Phe Glu Met Ile Leu Thr Asp Cys Pro Glu Leu Arg Asn Ile Pro
325 330 335

Trp Arg Cys Val Val Ile Asp Glu Ala His Arg Leu Lys Asn Arg Asn
340 345 350

Cys Lys Leu Leu Glu Gly Leu Lys Met Met Asp Leu Glu His Lys Val
355 360 365

Leu Leu Thr Gly Thr Pro Leu Gln Asn Thr Val Glu Glu Leu Phe Ser
370 375 380

Leu Leu His Phe Leu Glu Pro Ser Arg Phe Pro Ser Glu Thr Thr Phe

```
385                 390                 395                 400

Met Gln Glu Phe Gly Asp Leu Lys Thr Glu Glu Gln Val Gln Lys Leu
                405                 410                 415

Gln Ala Ile Leu Lys Pro Met Met Leu Arg Arg Leu Lys Glu Asp Val
            420                 425                 430

Glu Lys Asn Leu Ala Pro Lys Glu Glu Thr Ile Ile Glu Val Glu Leu
        435                 440                 445

Thr Asn Ile Gln Lys Lys Tyr Tyr Arg Ala Ile Leu Glu Lys Asn Phe
    450                 455                 460

Thr Phe Leu Ser Lys Gly Gly Gly Gln Ala Asn Val Pro Asn Leu Leu
465                 470                 475                 480

Asn Thr Met Met Glu Leu Arg Lys Cys Cys Asn His Pro Tyr Leu Ile
                485                 490                 495

Asn Gly Ala Glu Glu Lys Ile Leu Glu Glu Phe Lys Glu Thr His Asn
            500                 505                 510

Ala Glu Ser Pro Asp Phe Gln Leu Gln Ala Met Ile Gln Ala Ala Gly
        515                 520                 525

Lys Leu Val Leu Ile Asp Lys Leu Leu Pro Lys Leu Lys Ala Gly Gly
    530                 535                 540

His Arg Val Leu Ile Phe Ser Gln Met Val Arg Cys Leu Asp Ile Leu
545                 550                 555                 560

Glu Asp Tyr Leu Ile Gln Arg Arg Tyr Pro Tyr Glu Arg Ile Asp Gly
                565                 570                 575

Arg Val Arg Gly Asn Leu Arg Gln Ala Ala Ile Asp Arg Phe Ser Lys
            580                 585                 590

Pro Asp Ser Asp Arg Phe Val Phe Leu Leu Cys Thr Arg Ala Gly Gly
        595                 600                 605

Leu Gly Ile Asn Leu Thr Ala Ala Asp Thr Cys Ile Ile Phe Asp Ser
    610                 615                 620

Asp Trp Asn Pro Gln Asn Asp Leu Gln Ala Gln Ala Arg Cys His Arg
625                 630                 635                 640

Ile Gly Gln Ser Lys Ser Val Lys Ile Tyr Arg Leu Ile Thr Arg Asn
                645                 650                 655

Ser Tyr Glu Arg Glu Met Phe Asp Lys Ala Ser Leu Lys Leu Gly Leu
            660                 665                 670

Asp Lys Ala Val Leu Gln Ser Met Ser Gly Arg Glu Asn Ala Thr Asn
        675                 680                 685

Gly Val Gln Gln Leu Ser Lys Lys Glu Ile Glu Asp Leu Leu Arg Lys
    690                 695                 700

Gly Ala Tyr Gly Ala Leu Met Asp Glu Glu Asp Glu Gly Ser Lys Phe
```

705 710 715 720

Cys Glu Glu Asp Ile Asp Gln Ile Leu Leu Arg Arg Thr His Thr Ile
725 730 735

Thr Ile Glu Ser Glu Gly Lys Gly Ser Thr Phe Ala Lys Ala Ser Phe
740 745 750

Val Ala Ser Gly Asn Arg Thr Asp Ile Ser Leu Asp Asp Pro Asn Phe
755 760 765

Trp Gln Lys Trp Ala Lys Lys Ala Glu Leu Asp Ile Asp Ala Leu Asn
770 775 780

Gly Arg Asn Asn Leu Val Ile Asp Thr Pro Arg Val Arg Lys Gln Thr
785 790 795 800

Arg Leu Tyr Ser Ala Val Lys Glu Asp Glu Leu Met Glu Phe Ser Asp
805 810 815

Leu Glu Ser Asp Ser Glu Glu Lys Pro Cys Ala Lys Pro Arg Arg Pro
820 825 830

Gln Asp Lys Ser Gln Gly Tyr Ala Arg Ser Glu Cys Phe Arg Val Glu
835 840 845

Lys Asn Leu Leu Val Tyr Gly Trp Gly Arg Trp Thr Asp Ile Leu Ser
850 855 860

His Gly Arg Tyr Lys Arg Gln Leu Thr Glu Gln Asp Val Glu Thr Ile
865 870 875 880

Cys Arg Thr Ile Leu Val Tyr Cys Leu Asn His Tyr Lys Gly Asp Glu
885 890 895

Asn Ile Lys Ser Phe Ile Trp Asp Leu Ile Thr Pro Thr Ala Asp Gly
900 905 910

Gln Thr Arg Ala Leu Val Asn His Ser Gly Leu Ser Ala Pro Val Pro
915 920 925

Arg Gly Arg Lys Gly Lys Lys Val Lys Ala Gln Ser Thr Gln Pro Val
930 935 940

Val Gln Asp Ala Asp Trp Leu Ala Ser Cys Asn Pro Asp Ala Leu Phe
945 950 955 960

Gln Glu Asp Ser Tyr Lys Lys His Leu Lys His His Cys Asn Lys Val
965 970 975

Leu Leu Arg Val Arg Met Leu Tyr Tyr Leu Arg Gln Glu Val Ile Gly
980 985 990

Asp Gln Ala Asp Lys Ile Leu Glu Gly Ala Asp Ser Ser Glu Ala Asp
995 1000 1005

Val Trp Ile Pro Glu Pro Phe His Ala Glu Val Pro Ala Asp Trp
1010 1015 1020

Trp Asp Lys Glu Ala Asp Lys Ser Leu Leu Ile Gly Val Phe Lys

1025 1030 1035

His Gly Tyr Glu Lys Tyr Asn Ser Met Arg Ala Asp Pro Ala Leu
1040 1045 1050

Cys Phe Leu Glu Arg Val Gly Met Pro Asp Ala Lys Ala Ile Ala
1055 1060 1065

Ala Glu Gln Arg Gly Thr Asp Met Leu Ala Asp Gly Gly Asp Gly
1070 1075 1080

Gly Glu Phe Asp Arg Glu Asp Glu Asp Pro Glu Tyr Lys Pro Thr
1085 1090 1095

Arg Thr Pro Phe Lys Asp Glu Ile Asp Glu Phe Ala Asn Ser Pro
1100 1105 1110

Ser Glu Asp Lys Glu Glu Ser Met Glu Ile His Ala Thr Gly Lys
1115 1120 1125

His Ser Glu Ser Asn Ala Glu Leu Gly Gln Leu Tyr Trp Pro Asn
1130 1135 1140

Thr Ser Thr Leu Thr Thr Arg Leu Arg Arg Leu Ile Thr Ala Tyr
1145 1150 1155

Gln Arg Ser Tyr Lys Arg Gln Gln Met Arg Gln Glu Ala Leu Met
1160 1165 1170

Lys Thr Asp Arg Arg Arg Arg Arg Pro Arg Glu Glu Val Arg Ala
1175 1180 1185

Leu Glu Ala Glu Arg Glu Ala Ile Ile Ser Glu Lys Arg Gln Lys
1190 1195 1200

Trp Thr Arg Arg Glu Glu Ala Asp Phe Tyr Arg Val Val Ser Thr
1205 1210 1215

Phe Gly Val Ile Phe Asp Pro Val Lys Gln Gln Phe Asp Trp Asn
1220 1225 1230

Gln Phe Arg Ala Phe Ala Arg Leu Asp Lys Lys Ser Asp Glu Ser
1235 1240 1245

Leu Glu Lys Tyr Phe Ser Cys Phe Val Ala Met Cys Arg Arg Val
1250 1255 1260

Cys Arg Met Pro Val Lys Pro Asp Asp Glu Pro Pro Asp Leu Ser
1265 1270 1275

Ser Ile Ile Glu Pro Ile Thr Glu Glu Arg Ala Ser Arg Thr Leu
1280 1285 1290

Tyr Arg Ile Glu Leu Leu Arg Lys Ile Arg Glu Gln Val Leu His
1295 1300 1305

His Pro Gln Leu Gly Glu Arg Leu Lys Leu Cys Gln Pro Ser Leu
1310 1315 1320

Asp Leu Pro Glu Trp Trp Glu Cys Gly Arg His Asp Arg Asp Leu

```
    1325                1330                1335

Leu Val  Gly Ala Ala Lys His  Gly Val Ser Arg Thr  Asp Tyr His
    1340                1345                1350

Ile Leu  Asn Asp Pro Glu Leu  Ser Phe Leu Asp Ala  His Lys Asn
    1355                1360                1365

Phe Ala  Gln Asn Arg Gly Ala  Gly Asn Thr Ser Ser  Leu Asn Pro
    1370                1375                1380

Leu Ala  Val Gly Phe Val Gln  Thr Pro Pro Val Ile  Ser Ser Ala
    1385                1390                1395

His Ile  Gln Asp Glu Arg Val  Leu Glu Gln Ala Glu  Gly Lys Val
    1400                1405                1410

Glu Glu  Pro Glu Asn Pro Ala  Ala Lys Glu Lys Cys  Glu Gly Lys
    1415                1420                1425

Glu Glu  Glu Glu Glu Thr Asp  Gly Ser Gly Lys Glu  Ser Lys Gln
    1430                1435                1440

Glu Cys  Glu Ala Glu Ala Ser  Ser Val Lys Asn Glu  Leu Lys Gly
    1445                1450                1455

Val Glu  Val Gly Ala Asp Thr  Gly Ser Lys Ser Ile  Ser Glu Lys
    1460                1465                1470

Gly Ser  Glu Glu Asp Glu Glu  Glu Lys Leu Glu Asp  Asp Asp Lys
    1475                1480                1485

Ser Glu  Glu Ser Ser Gln Pro  Glu Ala Gly Ala Val  Ser Arg Gly
    1490                1495                1500

Lys Asn  Phe Asp Glu Glu Ser  Asn Ala Ser Met Ser  Thr Ala Arg
    1505                1510                1515

Asp Glu  Thr Arg Asp Gly Phe  Tyr Met Glu Asp Gly  Asp Pro Ser
    1520                1525                1530

Val Ala  Gln Leu Leu His Glu  Arg Thr Phe Ala Phe  Ser Phe Trp
    1535                1540                1545

Pro Lys  Asp Arg Val Met Ile  Asn Arg Leu Asp Asn  Ile Cys Glu
    1550                1555                1560

Ala Val  Leu Lys Gly Lys Trp  Pro Val Asn Arg Arg  Gln Met Phe
    1565                1570                1575

Asp Phe  Gln Gly Leu Ile Pro  Gly Tyr Thr Pro Thr  Thr Val Asp
    1580                1585                1590

Ser Pro  Leu Gln Lys Arg Ser  Phe Ala Glu Leu Ser  Met Val Gly
    1595                1600                1605

Gln Ala  Ser Ile Ser Gly Ser  Glu Asp Ile Thr Thr  Ser Pro Gln
    1610                1615                1620

Leu Ser  Lys Glu Asp Ala Leu  Asn Leu Ser Val Pro  Arg Gln Arg
```

1625 1630 1635

Arg Arg Arg Arg Arg Lys Ile Glu Ile Glu Ala Glu Arg Ala Ala
1640 1645 1650

Lys Arg Arg Asn Leu Met Glu Met Val Ala Gln Leu Arg Glu Ser
1655 1660 1665

Gln Val Val Ser Glu Asn Gly Gln Glu Lys Val Val Asp Leu Ser
1670 1675 1680

Lys Ala Ser Arg Glu Ala Thr Ser Ser Thr Ser Asn Phe Ser Ser
1685 1690 1695

Leu Ser Ser Lys Phe Ile Leu Pro Asn Val Ser Thr Pro Val Ser
1700 1705 1710

Asp Ala Phe Lys Thr Gln Met Glu Leu Leu Gln Ala Gly Leu Ser
1715 1720 1725

Arg Thr Pro Thr Arg His Leu Leu Asn Gly Ser Leu Val Asp Gly
1730 1735 1740

Glu Pro Pro Met Lys Arg Arg Arg Gly Arg Arg Lys Asn Val Glu
1745 1750 1755

Gly Leu Asp Leu Leu Phe Met Ser His Lys Arg Thr Ser Leu Ser
1760 1765 1770

Ala Glu Asp Ala Glu Val Thr Lys Ala Phe Glu Glu Asp Ile Glu
1775 1780 1785

Thr Pro Pro Thr Arg Asn Ile Pro Ser Pro Gly Gln Leu Asp Pro
1790 1795 1800

Asp Thr Arg Ile Pro Val Ile Asn Leu Glu Asp Gly Thr Arg Leu
1805 1810 1815

Val Gly Glu Asp Ala Pro Lys Asn Lys Asp Leu Val Glu Trp Leu
1820 1825 1830

Lys Leu His Pro Thr Tyr Thr Val Asp Met Pro Ser Tyr Val Pro
1835 1840 1845

Lys Asn Ala Asp Val Leu Phe Ser Ser Phe Gln Lys Pro Lys Gln
1850 1855 1860

Lys Arg His Arg Cys Arg Asn Pro Asn Lys Leu Asp Ile Asn Thr
1865 1870 1875

Leu Thr Gly Glu Glu Arg Val Pro Val Val Asn Lys Arg Asn Gly
1880 1885 1890

Lys Lys Met Gly Gly Ala Met Ala Pro Pro Met Lys Asp Leu Pro
1895 1900 1905

Arg Trp Leu Glu Glu Asn Pro Glu Phe Ala Val Ala Pro Asp Trp
1910 1915 1920

Thr Asp Ile Val Lys Gln Ser Gly Phe Val Pro Glu Ser Met Phe

```
    1925                1930                1935

Asp Arg  Leu Leu Thr Gly Pro  Val Val Arg Gly Glu  Gly Ala Ser
    1940                1945                1950

Arg Arg  Gly Arg Arg Pro Lys  Ser Glu Ile Ala Arg  Ala Ala
    1955                1960                1965
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<210> 17
<211> 109
<212> PRT
<213> Homo sapiens

<220>
<221> UNSURE
<222> (84)..(84)
<223> x = any amino acid

<220>
<221> UNSURE
<222> (100)..(100)
<223> x = any amino acid

<400> 17

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Arg Pro Ser Leu Pro Arg Ala Leu Pro Ala Ala Pro His Glu Arg Ser
1               5                   10                  15

Pro Ala Arg Pro Gly Ser Val Gly Gly Gly Ala Pro Pro Met Leu Leu
            20                  25                  30

Gln Pro Ala Pro Cys Ala Pro Ser Ala Gly Phe Pro Arg Pro Leu Ala
        35                  40                  45

Ala Pro Gly Ala Met His Leu Phe Ala Glu Gly His His Val His Gln
    50                  55                  60

Asp Leu Arg Gly Arg Pro Ala Val Pro His Tyr Arg Arg Leu Ala Gln
65                  70                  75                  80

Glu Val Leu Xaa Gly Leu Arg Arg His Leu Arg Arg Pro Trp Ser Ser
                85                  90                  95

Pro Thr Ala Xaa Arg Ala Ser Pro Ala Ala Thr Ala Ser
            100                 105
```

<210> 18
<211> 897
<212> PRT
<213> Homo sapiens

<400> 18

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Glu Phe Leu Leu Ser Lys Ser Lys Glu Pro Thr Pro Gly Gly Leu Asn
1               5                   10                  15

His Ser Leu Pro Gln His Pro Lys Cys Trp Gly Ala His His Ala Ser
            20                  25                  30
```

```
Leu Asp Gln Ser Ser Pro Pro Gln Ser Gly Pro Pro Gly Thr Pro Pro
        35                  40                  45

Ser Tyr Lys Leu Pro Leu Pro Gly Pro Tyr Asp Ser Arg Asp Asp Phe
    50                  55                  60

Pro Leu Arg Lys Thr Ala Ser Glu Pro Asn Leu Lys Val Arg Ser Arg
65                  70                  75                  80

Leu Lys Gln Lys Val Ala Glu Arg Arg Ser Ser Pro Leu Leu Arg Arg
                85                  90                  95

Lys Asp Gly Thr Val Ile Ser Thr Phe Lys Lys Arg Ala Val Glu Ile
            100                 105                 110

Thr Gly Ala Gly Pro Gly Ala Ser Ser Val Cys Asn Ser Ala Pro Gly
        115                 120                 125

Ser Gly Pro Ser Ser Pro Asn Ser Ser His Ser Thr Ile Ala Glu Asn
    130                 135                 140

Gly Phe Thr Gly Ser Val Pro Asn Ile Pro Thr Glu Met Leu Pro Gln
145                 150                 155                 160

His Arg Ala Leu Pro Leu Asp Ser Ser Pro Asn Gln Phe Ser Leu Tyr
                165                 170                 175

Thr Ser Pro Ser Leu Pro Asn Ile Ser Leu Gly Leu Gln Ala Thr Val
            180                 185                 190

Thr Val Thr Asn Ser His Leu Thr Ala Ser Pro Lys Leu Ser Thr Gln
        195                 200                 205

Gln Glu Ala Glu Arg Gln Ala Leu Gln Ser Leu Arg Gln Gly Gly Thr
    210                 215                 220

Leu Thr Gly Lys Phe Met Ser Thr Ser Ser Ile Pro Gly Cys Leu Leu
225                 230                 235                 240

Gly Val Ala Leu Glu Gly Asp Gly Ser Pro His Gly His Ala Ser Leu
                245                 250                 255

Leu Gln His Val Leu Leu Leu Glu Gln Ala Arg Gln Gln Ser Thr Leu
            260                 265                 270

Ile Ala Val Pro Leu His Gly Gln Ser Pro Leu Val Thr Gly Glu Arg
        275                 280                 285

Val Ala Thr Ser Met Arg Thr Val Gly Lys Leu Pro Arg His Arg Pro
    290                 295                 300

Leu Ser Arg Thr Gln Ser Ser Pro Leu Pro Gln Ser Pro Gln Ala Leu
305                 310                 315                 320

Gln Gln Leu Val Met Gln Gln Gln His Gln Gln Phe Leu Glu Lys Gln
                325                 330                 335

Lys Gln Gln Gln Leu Gln Leu Gly Lys Ile Leu Thr Lys Thr Gly Glu
            340                 345                 350
```

```
Leu Pro Arg Gln Pro Thr Thr His Pro Glu Glu Thr Glu Glu Glu Leu
        355                 360                 365

Thr Glu Gln Gln Glu Val Leu Leu Gly Glu Gly Ala Leu Thr Met Pro
    370                 375                 380

Arg Glu Gly Ser Thr Glu Ser Glu Ser Thr Gln Glu Asp Leu Glu Glu
385                 390                 395                 400

Glu Asp Glu Glu Glu Asp Gly Glu Glu Glu Glu Asp Cys Ile Gln Val
                405                 410                 415

Lys Asp Glu Glu Gly Glu Ser Gly Ala Glu Glu Gly Pro Asp Leu Glu
            420                 425                 430

Glu Pro Gly Ala Gly Tyr Lys Lys Leu Phe Ser Asp Ala Gln Pro Leu
        435                 440                 445

Gln Pro Leu Gln Val Tyr Gln Ala Pro Leu Ser Leu Ala Thr Val Pro
    450                 455                 460

His Gln Ala Leu Gly Arg Thr Gln Ser Ser Pro Ala Ala Pro Gly Gly
465                 470                 475                 480

Met Lys Asn Pro Pro Asp Gln Pro Val Lys His Leu Phe Thr Thr Ser
                485                 490                 495

Val Val Tyr Asp Thr Phe Met Leu Lys His Gln Cys Met Cys Gly Asn
            500                 505                 510

Thr His Val His Pro Glu His Ala Gly Arg Ile Gln Ser Ile Trp Ser
        515                 520                 525

Arg Leu Gln Glu Thr Gly Leu Leu Ser Lys Cys Glu Arg Ile Arg Gly
    530                 535                 540

Arg Lys Ala Thr Leu Asp Glu Ile Gln Thr Val His Ser Glu Tyr His
545                 550                 555                 560

Thr Leu Leu Tyr Gly Thr Ser Pro Leu Asn Arg Gln Lys Leu Asp Ser
                565                 570                 575

Lys Lys Leu Leu Gly Pro Ile Ser Gln Lys Met Tyr Ala Val Leu Pro
            580                 585                 590

Cys Gly Gly Ile Gly Val Asp Ser Asp Thr Val Trp Asn Glu Met His
        595                 600                 605

Ser Ser Ser Ala Val Arg Met Ala Val Gly Cys Leu Leu Glu Leu Ala
    610                 615                 620

Phe Lys Val Ala Ala Gly Glu Leu Lys Asn Gly Phe Ala Ile Ile Arg
625                 630                 635                 640

Pro Pro Gly His His Ala Glu Glu Ser Thr Ala Met Gly Phe Cys Phe
                645                 650                 655

Phe Asn Ser Val Ala Ile Thr Ala Lys Leu Leu Gln Gln Lys Leu Asn
            660                 665                 670
```

```
Val Gly Lys Val Leu Ile Val Asp Trp Asp Ile His His Gly Asn Gly
        675                 680                 685

Thr Gln Gln Ala Phe Tyr Asn Asp Pro Ser Val Leu Tyr Ile Ser Leu
    690                 695                 700

His Arg Tyr Asp Asn Gly Asn Phe Phe Pro Gly Ser Gly Ala Pro Glu
705                 710                 715                 720

Glu Val Gly Gly Gly Pro Gly Val Gly Tyr Asn Val Asn Val Ala Trp
                725                 730                 735

Thr Gly Gly Val Asp Pro Pro Ile Gly Asp Val Glu Tyr Leu Thr Ala
            740                 745                 750

Phe Arg Thr Val Val Met Pro Ile Ala His Glu Phe Ser Pro Asp Val
        755                 760                 765

Val Leu Val Ser Ala Gly Phe Asp Ala Val Glu Gly His Leu Ser Pro
    770                 775                 780

Leu Gly Gly Tyr Ser Val Thr Ala Arg Cys Phe Gly His Leu Thr Arg
785                 790                 795                 800

Gln Leu Met Thr Leu Ala Gly Gly Arg Val Val Leu Ala Leu Glu Gly
                805                 810                 815

Gly His Asp Leu Thr Ala Ile Cys Asp Ala Ser Glu Ala Cys Val Ser
            820                 825                 830

Ala Leu Leu Ser Val Lys Leu Gln Pro Leu Asp Glu Ala Val Leu Gln
        835                 840                 845

Gln Lys Pro Asn Ile Asn Ala Val Ala Thr Leu Glu Lys Val Ile Glu
    850                 855                 860

Ile Gln Ser Lys His Trp Ser Cys Val Gln Lys Phe Ala Ala Gly Leu
865                 870                 875                 880

Gly Arg Ser Leu Arg Gly Ala Gln Ala Gly Glu Thr Glu Glu Ala Glu
                885                 890                 895

Met
```

<210> 19
<211> 890
<212> PRT
<213> Homo sapiens

<400> 19

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Met Phe Asp Tyr Met Asp Cys Glu Leu Lys Leu Ser Glu Ser Val Phe
1               5                   10                  15

Arg Gln Leu Asn Thr Ala Ile Ala Val Ser Gln Met Ser Ser Gly Gln
            20                  25                  30

Cys Arg Leu Ala Pro Leu Ile Gln Val Ile Gln Asp Cys Ser His Leu
```

```
        35                  40                  45

Tyr His Tyr Thr Val Lys Leu Leu Phe Lys Leu His Ser Cys Leu Pro
    50                  55                  60

Ala Asp Thr Leu Gln Gly His Arg Asp Arg Phe His Glu Gln Phe His
65                  70                  75                  80

Ser Leu Arg Asn Phe Phe Arg Arg Ala Ser Asp Met Leu Tyr Phe Lys
                85                  90                  95

Arg Leu Ile Gln Ile Pro Arg Leu Pro Glu Gly Pro Pro Asn Phe Leu
            100                 105                 110

Arg Ala Ser Ala Leu Ala Glu His Ile Lys Pro Val Val Val Ile Pro
        115                 120                 125

Glu Glu Ala Pro Glu Asp Glu Glu Pro Glu Asn Leu Ile Glu Ile Ser
    130                 135                 140

Thr Gly Pro Pro Ala Gly Glu Pro Val Val Val Ala Asp Leu Phe Asp
145                 150                 155                 160

Gln Thr Phe Gly Pro Pro Asn Gly Ser Val Lys Asp Asp Arg Asp Leu
                165                 170                 175

Gln Ile Glu Ser Leu Lys Arg Glu Val Glu Met Leu Arg Ser Glu Leu
            180                 185                 190

Glu Lys Ile Lys Leu Glu Ala Gln Arg Tyr Ile Ala Gln Leu Lys Ser
        195                 200                 205

Gln Val Asn Ala Leu Glu Gly Glu Leu Glu Glu Gln Arg Lys Gln Lys
    210                 215                 220

Gln Lys Ala Leu Val Asp Asn Glu Gln Leu Arg His Glu Leu Ala Gln
225                 230                 235                 240

Leu Arg Ala Ala Gln Leu Glu Gly Glu Arg Ser Gln Gly Leu Arg Glu
                245                 250                 255

Glu Ala Glu Arg Lys Ala Ser Ala Thr Glu Ala Arg Tyr Asn Lys Leu
            260                 265                 270

Lys Glu Lys His Ser Glu Leu Val His Val His Ala Glu Leu Leu Arg
        275                 280                 285

Lys Asn Ala Asp Thr Ala Lys Gln Leu Thr Val Thr Gln Gln Ser Gln
    290                 295                 300

Glu Glu Val Ala Arg Val Lys Glu Gln Leu Ala Phe Gln Val Glu Gln
305                 310                 315                 320

Val Lys Arg Glu Ser Glu Leu Lys Leu Glu Glu Lys Ser Asp Gln Leu
                325                 330                 335

Glu Lys Leu Lys Arg Glu Leu Glu Ala Lys Ala Gly Glu Leu Ala Arg
            340                 345                 350

Ala Gln Glu Ala Leu Ser His Thr Glu Gln Ser Lys Ser Glu Leu Ser
```

```
        355                 360                 365

Ser Arg Leu Asp Thr Leu Ser Ala Glu Lys Asp Ala Leu Ser Gly Ala
    370                 375                 380

Val Arg Gln Arg Glu Ala Asp Leu Leu Ala Ala Gln Ser Leu Val Arg
385                 390                 395                 400

Glu Thr Glu Ala Ala Leu Ser Arg Glu Gln Gln Arg Ser Ser Gln Glu
                405                 410                 415

Gln Gly Glu Leu Gln Gly Arg Leu Ala Glu Arg Glu Ser Gln Glu Gln
            420                 425                 430

Gly Leu Arg Gln Arg Leu Leu Asp Glu Gln Phe Ala Val Leu Arg Gly
        435                 440                 445

Ala Ala Ala Glu Ala Ala Gly Ile Leu Gln Asp Ala Val Ser Lys Leu
    450                 455                 460

Asp Asp Pro Leu His Leu Arg Cys Thr Ser Ser Pro Asp Tyr Leu Val
465                 470                 475                 480

Ser Arg Ala Gln Glu Ala Leu Asp Ala Val Ser Thr Leu Glu Glu Gly
                485                 490                 495

His Ala Gln Tyr Leu Thr Ser Leu Ala Asp Ala Ser Ala Leu Val Ala
            500                 505                 510

Ala Leu Thr Arg Phe Ser His Leu Ala Ala Asp Thr Ile Ile Asn Gly
        515                 520                 525

Gly Ala Thr Ser His Leu Ala Pro Thr Asp Pro Ala Asp Arg Leu Ile
    530                 535                 540

Asp Thr Cys Arg Glu Cys Gly Ala Arg Ala Leu Glu Leu Met Gly Gln
545                 550                 555                 560

Leu Gln Asp Gln Gln Ala Leu Arg His Met Gln Ala Ser Leu Val Arg
                565                 570                 575

Thr Pro Leu Gln Gly Ile Leu Gln Leu Gly Gln Glu Leu Lys Pro Lys
            580                 585                 590

Ser Leu Asp Val Arg Gln Glu Glu Leu Gly Ala Val Val Asp Lys Glu
        595                 600                 605

Met Ala Ala Thr Ser Ala Ala Ile Glu Asp Ala Val Arg Arg Ile Glu
    610                 615                 620

Asp Met Met Asn Gln Ala Arg His Ala Ser Ser Gly Val Lys Leu Glu
625                 630                 635                 640

Val Asn Glu Arg Ile Leu Asn Ser Cys Thr Asp Leu Met Lys Ala Ile
                645                 650                 655

Arg Leu Leu Val Thr Thr Ser Thr Ser Leu Gln Lys Glu Ile Val Glu
            660                 665                 670

Ser Gly Arg Gly Ala Ala Thr Gln Gln Glu Phe Tyr Ala Lys Asn Ser
```

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        675                 680                 685

Arg Trp Thr Glu Gly Leu Ile Ser Ala Ser Lys Ala Val Gly Trp Gly
    690                 695                 700

Ala Thr Gln Leu Val Glu Ala Ala Asp Lys Val Val Leu His Thr Gly
705                 710                 715                 720

Lys Tyr Glu Glu Leu Ile Val Cys Ser His Glu Ile Ala Ala Ser Thr
                725                 730                 735

Ala Gln Leu Val Ala Ala Ser Lys Val Lys Ala Asn Lys His Ser Pro
            740                 745                 750

His Leu Ser Arg Leu Gln Glu Cys Ser Arg Thr Val Asn Glu Arg Ala
        755                 760                 765

Ala Asn Val Val Ala Ser Thr Lys Ser Gly Gln Glu Gln Ile Glu Asp
    770                 775                 780

Arg Asp Thr Met Asp Phe Ser Gly Leu Ser Leu Ile Lys Leu Lys Lys
785                 790                 795                 800

Gln Glu Met Glu Thr Gln Val Arg Val Leu Glu Leu Glu Lys Thr Leu
                805                 810                 815

Glu Ala Glu Arg Met Arg Leu Gly Glu Leu Arg Lys Gln His Tyr Val
            820                 825                 830

Leu Ala Gly Ala Ser Gly Ser Pro Gly Glu Glu Val Ala Ile Arg Pro
        835                 840                 845

Ser Thr Ala Pro Arg Ser Val Thr Thr Lys Lys Pro Pro Leu Ala Gln
    850                 855                 860

Lys Pro Ser Val Ala Pro Arg Gln Asp His Gln Leu Asp Lys Lys Asp
865                 870                 875                 880

Gly Ile Tyr Pro Ala Gln Leu Val Asn Tyr
                885                 890
```

<210> 20
<211> 725
<212> PRT
<213> Homo sapiens

<400> 20

```
Met Ala Met Asp Ser Ser Leu Gln Ala Arg Leu Phe Pro Gly Leu Ala
1               5                   10                  15

Ile Lys Ile Gln Arg Ser Asn Gly Leu Ile His Ser Ala Asn Val Arg
            20                  25                  30

Thr Val Asn Leu Glu Lys Ser Cys Val Ser Val Glu Trp Ala Glu Gly
        35                  40                  45

Gly Ala Thr Lys Gly Lys Glu Ile Asp Phe Asp Asp Val Ala Ala Ile
    50                  55                  60
```

```
Asn Pro Glu Leu Leu Gln Leu Leu Pro Leu His Pro Lys Asp Asn Leu
65                  70                  75                  80

Pro Leu Gln Glu Asn Val Thr Ile Gln Lys Gln Lys Arg Arg Ser Val
                85                  90                  95

Asn Ser Lys Ile Pro Ala Pro Lys Glu Ser Leu Arg Ser Arg Ser Thr
            100                 105                 110

Arg Met Ser Thr Val Ser Glu Leu Arg Ile Thr Ala Gln Glu Asn Asp
        115                 120                 125

Met Glu Val Glu Leu Pro Ala Ala Ala Asn Ser Arg Lys Gln Phe Ser
    130                 135                 140

Val Pro Pro Ala Pro Thr Arg Pro Ser Cys Pro Ala Val Ala Glu Ile
145                 150                 155                 160

Pro Leu Arg Met Val Ser Glu Glu Met Glu Glu Gln Val His Ser Ile
                165                 170                 175

Arg Gly Ser Ser Ser Ala Asn Pro Val Asn Ser Val Arg Arg Lys Ser
            180                 185                 190

Cys Leu Val Lys Glu Val Glu Lys Met Lys Asn Lys Arg Glu Glu Lys
        195                 200                 205

Lys Ala Gln Asn Ser Glu Met Arg Met Lys Arg Ala Gln Glu Tyr Asp
    210                 215                 220

Ser Ser Phe Pro Asn Trp Glu Phe Ala Arg Met Ile Lys Glu Phe Arg
225                 230                 235                 240

Ala Thr Leu Glu Cys His Pro Leu Thr Met Thr Asp Pro Ile Glu Glu
                245                 250                 255

His Arg Ile Cys Val Cys Val Arg Lys Arg Pro Leu Asn Lys Gln Glu
            260                 265                 270

Leu Ala Lys Lys Glu Ile Asp Val Ile Ser Ile Pro Ser Lys Cys Leu
        275                 280                 285

Leu Leu Val His Glu Pro Lys Leu Lys Val Asp Leu Thr Lys Tyr Leu
    290                 295                 300

Glu Asn Gln Ala Phe Cys Phe Asp Phe Ala Phe Asp Glu Thr Ala Ser
305                 310                 315                 320

Asn Glu Val Val Tyr Arg Phe Thr Ala Arg Pro Leu Val Gln Thr Ile
                325                 330                 335

Phe Glu Gly Gly Lys Ala Thr Cys Phe Ala Tyr Gly Gln Thr Gly Ser
            340                 345                 350

Gly Lys Thr His Thr Met Gly Gly Asp Leu Ser Gly Lys Ala Gln Asn
        355                 360                 365

Ala Ser Lys Gly Ile Tyr Ala Met Ala Ser Arg Asp Val Phe Leu Leu
    370                 375                 380
```

Lys Asn Gln Pro Cys Tyr Arg Lys Leu Gly Leu Glu Val Tyr Val Thr
385 390 395 400

Phe Phe Glu Ile Tyr Asn Gly Lys Leu Phe Asp Leu Leu Asn Lys Lys
405 410 415

Ala Lys Leu Arg Val Leu Glu Asp Gly Lys Gln Gln Val Gln Val Val
420 425 430

Gly Leu Gln Glu His Leu Val Asn Ser Ala Asp Asp Val Ile Lys Met
435 440 445

Leu Asp Met Gly Ser Ala Cys Arg Thr Ser Gly Gln Thr Phe Ala Asn
450 455 460

Ser Asn Ser Ser Arg Ser His Ala Cys Phe Gln Ile Ile Leu Arg Ala
465 470 475 480

Lys Gly Arg Met His Gly Lys Phe Ser Leu Val Asp Leu Ala Gly Asn
485 490 495

Glu Arg Gly Ala Asp Thr Ser Ser Ala Asp Arg Gln Thr Arg Met Glu
500 505 510

Gly Ala Glu Ile Asn Lys Ser Leu Leu Ala Leu Lys Glu Cys Ile Arg
515 520 525

Ala Leu Gly Gln Asn Lys Ala His Thr Pro Phe Arg Glu Ser Lys Leu
530 535 540

Thr Gln Val Leu Arg Asp Ser Phe Ile Gly Glu Asn Ser Arg Thr Cys
545 550 555 560

Met Ile Ala Thr Ile Ser Pro Gly Ile Ser Ser Cys Glu Tyr Thr Leu
565 570 575

Asn Thr Leu Arg Tyr Ala Asp Arg Val Lys Glu Leu Ser Pro His Ser
580 585 590

Gly Pro Ser Gly Glu Gln Leu Ile Gln Met Glu Thr Glu Glu Met Glu
595 600 605

Ala Cys Ser Asn Gly Ala Leu Ile Pro Gly Asn Leu Ser Lys Glu Glu
610 615 620

Glu Glu Leu Ser Ser Gln Met Ser Ser Phe Asn Glu Ala Met Thr Gln
625 630 635 640

Ile Arg Glu Leu Glu Glu Lys Ala Met Glu Glu Leu Lys Glu Ile Ile
645 650 655

Gln Gln Gly Pro Asp Trp Leu Glu Leu Ser Glu Met Thr Glu Gln Pro
660 665 670

Asp Tyr Asp Leu Glu Thr Phe Val Asn Lys Ala Glu Ser Ala Leu Ala
675 680 685

Gln Gln Ala Lys His Phe Ser Ala Leu Arg Asp Val Ile Lys Ala Leu
690 695 700

```
Arg Leu Ala Met Gln Leu Glu Glu Gln Ala Ser Arg Gln Ile Ser Ser
705                 710                 715                 720

Lys Lys Arg Pro Gln
                725
```

<210> 21
<211> 752
<212> PRT
<213> Homo sapiens

<400> 21

```
Arg Val Lys Ala Thr Leu Ser Glu Arg Lys Ile Gly Asp Ser Cys Asp
1               5                  10                  15

Lys Asp Leu Pro Leu Lys Phe Cys Glu Phe Pro Gln Lys Thr Ile Met
            20                  25                  30

Pro Gly Phe Lys Thr Thr Val Tyr Val Ser His Ile Asn Asp Leu Ser
        35                  40                  45

Asp Phe Tyr Val Gln Leu Ile Glu Asp Glu Ala Glu Ile Ser His Leu
    50                  55                  60

Ser Glu Arg Leu Asn Ser Val Lys Thr Arg Pro Glu Tyr Tyr Val Gly
65                  70                  75                  80

Pro Pro Leu Gln Arg Gly Asp Met Ile Cys Ala Val Phe Pro Glu Asp
                85                  90                  95

Asn Leu Trp Tyr Arg Ala Val Ile Lys Glu Gln Gln Pro Asn Asp Leu
            100                 105                 110

Leu Ser Val Gln Phe Ile Asp Tyr Gly Asn Val Ser Val Val His Thr
        115                 120                 125

Asn Lys Ile Gly Arg Leu Asp Leu Val Asn Ala Ile Leu Pro Gly Leu
    130                 135                 140

Cys Ile His Cys Ser Leu Gln Gly Phe Glu Val Pro Asp Asn Lys Asn
145                 150                 155                 160

Ser Lys Lys Met Met His Tyr Phe Ser Gln Arg Thr Ser Glu Ala Ala
                165                 170                 175

Ile Arg Cys Glu Phe Val Lys Phe Gln Asp Arg Trp Glu Val Ile Leu
            180                 185                 190

Ala Asp Glu His Gly Ile Ile Ala Asp Asp Met Ile Ser Arg Tyr Ala
        195                 200                 205

Leu Ser Glu Lys Ser Gln Val Glu Leu Ser Thr Gln Val Ile Lys Ser
    210                 215                 220

Ala Ser Ser Lys Ser Val Asn Lys Ser Asp Ile Asp Thr Ser Val Phe
225                 230                 235                 240

Leu Asn Trp Tyr Asn Pro Glu Lys Lys Met Ile Arg Ala Tyr Ala Thr
                245                 250                 255
```

```
Val Ile Asp Gly Pro Glu Tyr Phe Trp Cys Gln Phe Ala Asp Thr Glu
            260                 265                 270

Lys Leu Gln Cys Leu Glu Val Glu Val Gln Thr Ala Gly Glu Gln Val
        275                 280                 285

Ala Asp Arg Arg Asn Cys Ile Pro Cys Pro Tyr Ile Gly Asp Pro Cys
    290                 295                 300

Ile Val Arg Tyr Arg Glu Asp Gly His Tyr Tyr Arg Ala Leu Ile Thr
305                 310                 315                 320

Asn Ile Cys Glu Asp Tyr Leu Val Ser Val Arg Leu Val Asp Phe Gly
                325                 330                 335

Asn Ile Glu Asp Cys Val Asp Pro Lys Ala Leu Trp Ala Ile Pro Ser
            340                 345                 350

Glu Leu Leu Ser Val Pro Met Gln Ala Phe Pro Cys Cys Leu Ser Gly
        355                 360                 365

Phe Asn Ile Ser Glu Gly Leu Cys Ser Gln Glu Gly Asn Asp Tyr Phe
    370                 375                 380

Tyr Glu Ile Ile Thr Glu Asp Val Leu Glu Ile Thr Ile Leu Glu Ile
385                 390                 395                 400

Arg Arg Asp Val Cys Asp Ile Pro Leu Ala Ile Val Asp Leu Lys Ser
                405                 410                 415

Lys Gly Lys Ser Ile Asn Glu Lys Met Glu Lys Tyr Ser Lys Thr Gly
            420                 425                 430

Ile Lys Ser Ala Leu Pro Tyr Glu Asn Ile Asp Ser Glu Ile Lys Gln
        435                 440                 445

Thr Leu Gly Ser Tyr Asn Leu Asp Val Gly Leu Lys Lys Leu Ser Asn
    450                 455                 460

Lys Ala Val Gln Asn Lys Ile Tyr Met Glu Gln Gln Thr Asp Glu Leu
465                 470                 475                 480

Ala Glu Ile Thr Glu Lys Asp Val Asn Ile Ile Gly Thr Lys Pro Ser
                485                 490                 495

Asn Phe Arg Asp Pro Lys Thr Asp Asn Ile Cys Glu Gly Phe Glu Asn
            500                 505                 510

Pro Cys Lys Asp Lys Ile Asp Thr Glu Glu Leu Glu Gly Glu Leu Glu
        515                 520                 525

Cys His Leu Val Asp Lys Ala Glu Phe Asp Asp Lys Tyr Leu Ile Thr
    530                 535                 540

Gly Phe Asn Thr Leu Leu Pro His Ala Asn Glu Thr Lys Glu Ile Leu
545                 550                 555                 560

Glu Leu Asn Ser Leu Glu Val Pro Leu Ser Pro Asp Asp Glu Ser Lys
                565                 570                 575
```

Glu Phe Leu Glu Leu Glu Ser Ile Glu Leu Gln Asn Ser Leu Val Val
580 585 590

Asp Glu Glu Lys Gly Glu Leu Ser Pro Val Pro Pro Asn Val Pro Leu
595 600 605

Ser Gln Glu Cys Val Thr Lys Gly Ala Met Glu Leu Phe Thr Leu Gln
610 615 620

Leu Pro Leu Ser Cys Glu Ala Glu Lys Gln Pro Glu Leu Glu Leu Pro
625 630 635 640

Thr Ala Gln Leu Pro Leu Asp Asp Lys Met Asp Pro Leu Ser Leu Gly
645 650 655

Val Ser Gln Lys Ala Gln Glu Ser Met Cys Thr Glu Asp Met Arg Lys
660 665 670

Ser Ser Cys Val Glu Ser Phe Asp Asp Gln Arg Arg Met Ser Leu His
675 680 685

Leu His Gly Ala Asp Cys Asp Pro Lys Thr Gln Asn Glu Met Asn Ile
690 695 700

Cys Glu Glu Glu Phe Val Glu Tyr Lys Asn Arg Asp Ala Ile Ser Ala
705 710 715 720

Leu Met Pro Phe Ser Leu Arg Lys Lys Ala Val Met Glu Ala Ser Thr
725 730 735

Ile Met Val Tyr Gln Ile Ile Phe Gln Asn Tyr Arg Thr Pro Thr Leu
740 745 750

<210> 22
<211> 286
<212> PRT
<213> Homo sapiens

<400> 22

Ala Glu Val Lys Thr Pro Phe Asp Leu Ala Lys Ala Gln Glu Asn Ser
1 5 10 15

Asn Ser Val Lys Lys Lys Thr Lys Phe Val Asn Leu Tyr Thr Arg Glu
20 25 30

Arg Gln Asp Arg Leu Ala Val Leu Leu Pro Gly Arg His Pro Cys Asp
35 40 45

Cys Leu Gly Gln Lys His Lys Leu Ile Asn Asn Cys Leu Ile Cys Gly
50 55 60

Arg Ile Val Cys Glu Gln Glu Gly Ser Gly Pro Cys Leu Phe Cys Gly
65 70 75 80

Thr Leu Val Cys Thr His Glu Glu Gln Asp Ile Leu Gln Arg Asp Ser
85 90 95

Asn Lys Ser Gln Lys Leu Leu Lys Lys Leu Met Ser Gly Val Glu Asn

```
            100                 105                 110

Ser Gly Lys Val Asp Ile Ser Thr Lys Asp Leu Leu Pro His Gln Glu
        115                 120                 125

Leu Arg Ile Lys Ser Gly Leu Glu Lys Ala Ile Lys His Lys Asp Lys
    130                 135                 140

Leu Leu Glu Phe Asp Arg Thr Ser Ile Arg Arg Thr Gln Val Ile Asp
145                 150                 155                 160

Asp Glu Ser Asp Tyr Phe Ala Ser Asp Ser Asn Gln Trp Leu Ser Lys
                165                 170                 175

Leu Glu Arg Glu Thr Leu Gln Lys Arg Glu Glu Glu Leu Arg Glu Leu
            180                 185                 190

Arg His Ala Ser Arg Leu Ser Lys Lys Val Thr Ile Asp Phe Ala Gly
        195                 200                 205

Arg Lys Ile Leu Glu Glu Glu Asn Ser Leu Ala Glu Tyr His Ser Arg
    210                 215                 220

Leu Asp Glu Thr Ile Gln Ala Ile Ala Asn Gly Thr Leu Asn Gln Pro
225                 230                 235                 240

Leu Thr Lys Leu Asp Arg Ser Ser Glu Glu Pro Leu Gly Val Leu Val
                245                 250                 255

Asn Pro Asn Met Tyr Gln Ser Pro Pro Gln Trp Leu Thr Thr Gln Val
            260                 265                 270

Gln Pro His Arg Arg Arg Leu Ser Val Leu Gln Asp Leu Asp
        275                 280                 285

<210>  23
<211>  197
<212>  PRT
<213>  Homo sapiens

<400>  23

Pro Ser Lys Leu Gln Lys Asn Lys Gln Arg Leu Arg Asn Asp Pro Leu
1               5                   10                  15

Asn Gln Asn Lys Gly Lys Pro Asp Leu Asn Thr Thr Leu Pro Ile Arg
            20                  25                  30

Gln Thr Ala Ser Ile Phe Lys Gln Pro Val Thr Lys Val Thr Asn His
        35                  40                  45

Pro Ser Asn Lys Val Lys Ser Asp Pro Gln Arg Met Asn Glu Gln Pro
    50                  55                  60

Arg Gln Leu Phe Trp Glu Lys Arg Leu Gln Gly Leu Ser Ala Ser Asp
65                  70                  75                  80

Val Thr Glu Gln Ile Ile Lys Thr Met Glu Leu Pro Lys Gly Leu Gln
                85                  90                  95
```

```
Gly Val Gly Pro Gly Ser Asn Asp Glu Thr Leu Leu Ser Ala Val Ala
            100                 105                 110

Ser Ala Leu His Thr Ser Ser Ala Pro Ile Thr Gly Gln Val Ser Ala
        115                 120                 125

Ala Val Glu Lys Asn Pro Ala Val Trp Leu Asn Thr Ser Gln Pro Leu
    130                 135                 140

Cys Lys Ala Phe Ile Val Thr Asp Glu Asp Ile Arg Lys Gln Glu Glu
145                 150                 155                 160

Arg Val Gln Gln Val Arg Lys Lys Leu Glu Glu Ala Leu Met Ala Asp
                165                 170                 175

Ile Leu Ser Arg Ala Ala Asp Thr Glu Glu Met Asp Ile Glu Met Asp
            180                 185                 190

Ser Gly Asp Glu Ala
        195

<210>  24
<211>  353
<212>  PRT
<213>  Homo sapiens

<220>
<221>  UNSURE
<222>  (76)..(76)
<223>  X = any amino acid


<400>  24

Met Glu Glu Pro Gln Ser Asp Pro Ser Val Glu Pro Pro Leu Ser Gln
1               5                   10                  15

Glu Thr Phe Ser Asp Leu Trp Lys Leu Leu Pro Glu Asn Asn Val Leu
            20                  25                  30

Ser Pro Leu Pro Ser Gln Ala Met Asp Asp Leu Met Leu Ser Pro Asp
        35                  40                  45

Asp Ile Glu Gln Trp Phe Thr Glu Asp Pro Gly Pro Asp Glu Ala Pro
    50                  55                  60

Arg Met Pro Glu Ala Ala Pro Pro Val Ala Pro Xaa Thr Ser Ser Ser
65                  70                  75                  80

Tyr Thr Gly Gly Pro Cys Thr Ser Pro Leu Leu Ala Pro Val Ile Phe
                85                  90                  95

Val Pro Ser Gln Lys Thr Tyr Gln Gly Ser Tyr Gly Phe Arg Leu Gly
            100                 105                 110

Phe Leu His Ser Gly Thr Ala Lys Ser Val Thr Cys Thr Tyr Ser Pro
        115                 120                 125

Ala Leu Asn Lys Met Phe Cys Gln Leu Ala Lys Thr Cys Pro Val Gln
    130                 135                 140
```

Leu Trp Val Asp Ser Thr Pro Pro Pro Gly Thr Arg Val Arg Ala Met
145 150 155 160

Ala Ile Tyr Lys Gln Ser Gln His Met Thr Glu Val Val Arg Arg Cys
165 170 175

Pro His His Glu Arg Cys Ser Asp Ser Asp Gly Leu Ala Pro Pro Gln
180 185 190

His Leu Ile Arg Val Glu Gly Asn Leu Arg Val Glu Tyr Leu Asp Asp
195 200 205

Arg Asn Thr Phe Arg His Ser Val Val Val Pro Cys Glu Pro Pro Glu
210 215 220

Val Gly Ser Asp Cys Thr Thr Ile His Tyr Asn Tyr Met Cys Asn Ser
225 230 235 240

Ser Cys Met Gly Gly Met Asn Arg Arg Pro Ile Leu Thr Ile Ile Thr
245 250 255

Leu Glu Asp Ser Ser Gly Asn Leu Leu Gly Arg Asn Ser Phe Glu Val
260 265 270

His Val Cys Ala Cys Pro Gly Arg Asp Arg Arg Thr Glu Glu Glu Asn
275 280 285

Leu Arg Lys Lys Gly Glu Pro His His Glu Leu Pro Pro Gly Ser Thr
290 295 300

Lys Arg Ala Leu Pro Asn Asn Thr Ser Ser Ser Pro Gln Pro Lys Lys
305 310 315 320

Lys Pro Leu Asp Gly Glu Tyr Phe Thr Leu Gln Ile Arg Gly Arg Glu
325 330 335

Arg Phe Glu Met Phe Arg Glu Leu Asn Glu Ala Leu Glu Leu Lys Asp
340 345 350

Ala

<210> 25
<211> 545
<212> PRT
<213> Homo sapiens

<400> 25

Met Glu Thr Pro Ser Gln Arg Arg Ala Thr Arg Ser Gly Ala Gln Ala
1 5 10 15

Ser Ser Thr Pro Leu Ser Pro Thr Arg Ile Thr Arg Leu Gln Glu Lys
20 25 30

Glu Asp Leu Gln Glu Leu Asn Asp Arg Leu Ala Val Tyr Ile Asp Arg
35 40 45

Val Arg Ser Leu Glu Thr Glu Asn Ala Gly Leu Arg Leu Arg Ile Thr

```
    50                  55                  60

Glu Ser Glu Glu Val Val Ser Arg Glu Val Ser Gly Ile Lys Ala Ala
65                  70                  75                  80

Tyr Glu Ala Glu Leu Gly Asp Ala Arg Lys Thr Leu Asp Ser Val Ala
                85                  90                  95

Lys Glu Arg Ala Arg Leu Gln Leu Glu Leu Ser Lys Val Arg Glu Glu
            100                 105                 110

Phe Lys Glu Leu Lys Ala Arg Asn Thr Lys Lys Glu Gly Asp Leu Ile
        115                 120                 125

Ala Ala Gln Ala Arg Leu Lys Asp Leu Glu Ala Leu Leu Asn Ser Lys
    130                 135                 140

Glu Ala Ala Leu Ser Thr Ala Leu Ser Glu Lys Arg Thr Leu Glu Gly
145                 150                 155                 160

Glu Leu His Asp Leu Arg Gly Gln Val Ala Lys Leu Glu Ala Ala Leu
                165                 170                 175

Gly Glu Ala Lys Lys Gln Leu Gln Asp Glu Met Leu Arg Arg Val Asp
            180                 185                 190

Ala Glu Asn Arg Leu Gln Thr Met Lys Glu Glu Leu Asp Phe Gln Lys
        195                 200                 205

Asn Ile Tyr Ser Glu Glu Leu Arg Glu Thr Lys Arg Arg His Glu Thr
    210                 215                 220

Arg Leu Val Glu Ile Asp Asn Gly Lys Gln Arg Glu Phe Glu Ser Arg
225                 230                 235                 240

Leu Ala Asp Ala Leu Gln Glu Leu Arg Ala Gln His Glu Asp Gln Val
                245                 250                 255

Glu Gln Tyr Lys Lys Glu Leu Glu Lys Thr Tyr Ser Ala Lys Leu Asp
            260                 265                 270

Asn Ala Arg Gln Ser Ala Glu Arg Asn Ser Asn Leu Val Gly Ala Ala
        275                 280                 285

His Glu Glu Leu Gln Gln Ser Arg Ile Arg Ile Asp Ser Leu Ser Ala
    290                 295                 300

Gln Leu Ser Gln Leu Gln Lys Gln Leu Ala Ala Lys Glu Ala Lys Leu
305                 310                 315                 320

Arg Asp Leu Glu Asp Ser Leu Ala Arg Glu Arg Asp Thr Ser Arg Arg
                325                 330                 335

Leu Leu Ala Glu Lys Glu Arg Glu Met Ala Glu Met Arg Ala Arg Met
            340                 345                 350

Gln Gln Gln Leu Asp Glu Tyr Gln Glu Leu Leu Asp Ile Lys Leu Ala
        355                 360                 365

Leu Asp Met Glu Ile His Ala Tyr Arg Lys Leu Leu Glu Gly Glu Glu
```

370 375 380

Glu Arg Leu Arg Leu Ser Pro Ser Pro Thr Ser Gln Arg Ser Arg Gly
385 390 395 400

Arg Ala Ser Ser His Ser Ser Gln Thr Gln Gly Gly Gly Ser Val Thr
405 410 415

Lys Lys Arg Lys Leu Glu Ser Thr Glu Ser Arg Ser Ser Phe Ser Gln
420 425 430

His Ala Arg Thr Ser Gly Arg Val Ala Val Glu Glu Val Asp Glu Glu
435 440 445

Gly Lys Phe Val Arg Leu Arg Asn Lys Ser Asn Glu Asp Gln Ser Met
450 455 460

Gly Asn Trp Gln Ile Lys Arg Gln Asn Gly Asp Asp Pro Leu Leu Thr
465 470 475 480

Tyr Arg Phe Pro Pro Lys Phe Thr Leu Lys Ala Gly Gln Val Val Thr
485 490 495

Ile Trp Ala Ala Gly Ala Gly Ala Thr His Ser Pro Pro Thr Asp Leu
500 505 510

Val Trp Lys Ala Gln Asn Thr Trp Gly Cys Gly Asn Ser Leu Arg Thr
515 520 525

Ala Leu Ile Asn Ser Thr Gly Glu Glu Val Ala Met Arg Lys Leu Val
530 535 540

Arg
545

<210> 26
<211> 1227
<212> PRT
<213> Homo sapiens

<400> 26

Gln Gly Ala Gln Arg Gly Ala Arg Val Gly Ala Ala Met Gly Leu Arg
1 5 10 15

Arg Ser Gly Asp Ser Arg Glu Pro Ser Gly Pro Gly Pro Glu Arg Val
20 25 30

Phe Ser Gly Gly Pro Arg Pro Pro Ala Arg Gly Ala Gly Ala Pro Ala
35 40 45

Pro Val Ala Gly Ala Val Ala Gly Cys Gly Gly Gly Gln Asp His Val
50 55 60

Gly Ser Pro Leu Arg Arg Arg Gly Ser Gly Leu Arg Asp Ala Ala Ala
65 70 75 80

Glu Ala Val Glu Pro Ala Ala Arg Glu Leu Phe Glu Ala Cys Arg Asn
85 90 95

Gly Asp Val Glu Arg Val Lys Arg Leu Val Thr Pro Glu Lys Val Asn
100 105 110

Ser Arg Asp Thr Ala Gly Arg Lys Ser Thr Pro Leu His Phe Ala Ala
115 120 125

Gly Phe Gly Arg Lys Asp Val Val Glu Tyr Leu Leu Gln Asn Gly Ala
130 135 140

Asn Val Gln Ala Arg Asp Asp Gly Gly Leu Ile Pro Leu His Asn Ala
145 150 155 160

Cys Ser Phe Gly His Ala Glu Val Val Asn Leu Leu Leu Arg His Gly
165 170 175

Ala Asp Pro Asn Ala Arg Asp Asn Trp Asn Tyr Thr Pro Leu His Glu
180 185 190

Ala Ala Ile Lys Gly Lys Ile Asp Val Cys Ile Val Leu Leu Gln His
195 200 205

Gly Ala Glu Pro Thr Ile Arg Asn Thr Asp Gly Arg Thr Ala Leu Asp
210 215 220

Leu Ala Asp Pro Ser Ala Lys Ala Val Leu Thr Gly Glu Tyr Lys Lys
225 230 235 240

Asp Glu Leu Leu Glu Ser Ala Arg Ser Gly Asn Glu Glu Lys Met Met
245 250 255

Ala Leu Leu Thr Pro Leu Asn Val Asn Cys His Ala Ser Asp Gly Arg
260 265 270

Lys Ser Thr Pro Leu His Leu Ala Ala Gly Tyr Asn Arg Val Lys Ile
275 280 285

Val Gln Leu Leu Leu Gln His Gly Ala Asp Val His Ala Lys Asp Lys
290 295 300

Gly Asp Leu Val Pro Leu His Asn Ala Cys Ser Tyr Gly His Tyr Glu
305 310 315 320

Val Thr Glu Leu Leu Val Lys His Gly Ala Cys Val Asn Ala Met Asp
325 330 335

Leu Trp Gln Phe Thr Pro Leu His Glu Ala Ala Ser Lys Asn Arg Val
340 345 350

Glu Val Cys Ser Leu Leu Leu Ser Tyr Gly Ala Asp Pro Thr Leu Leu
355 360 365

Asn Cys His Asn Lys Ser Ala Ile Asp Leu Ala Pro Thr Pro Gln Leu
370 375 380

Lys Glu Arg Leu Ala Tyr Glu Phe Lys Gly His Ser Leu Leu Gln Ala
385 390 395 400

Ala Arg Glu Ala Asp Val Thr Arg Ile Lys Lys His Leu Ser Leu Glu
405 410 415

```
Met Val Asn Phe Lys His Pro Gln Thr His Glu Thr Ala Leu His Cys
            420                 425                 430

Ala Ala Ala Ser Pro Tyr Pro Lys Arg Lys Gln Ile Cys Glu Leu Leu
        435                 440                 445

Leu Arg Lys Gly Ala Asn Ile Asn Glu Lys Thr Lys Glu Phe Leu Thr
    450                 455                 460

Pro Leu His Val Ala Ser Glu Lys Ala His Asn Asp Val Val Glu Val
465                 470                 475                 480

Val Val Lys His Glu Ala Lys Val Asn Ala Leu Asp Asn Leu Gly Gln
                485                 490                 495

Thr Ser Leu His Arg Ala Ala Tyr Cys Gly His Leu Gln Thr Cys Arg
            500                 505                 510

Leu Leu Leu Ser Tyr Gly Cys Asp Pro Asn Ile Ile Ser Leu Gln Gly
        515                 520                 525

Phe Thr Ala Leu Gln Met Gly Asn Glu Asn Val Gln Gln Leu Leu Gln
    530                 535                 540

Glu Gly Ile Ser Leu Gly Asn Ser Glu Ala Asp Arg Gln Leu Leu Glu
545                 550                 555                 560

Ala Ala Lys Ala Gly Asp Val Glu Thr Val Lys Lys Leu Cys Thr Val
                565                 570                 575

Gln Ser Val Asn Cys Arg Asp Ile Glu Gly Arg Gln Ser Thr Pro Leu
            580                 585                 590

His Phe Ala Ala Gly Tyr Asn Arg Val Ser Val Val Glu Tyr Leu Leu
        595                 600                 605

Gln His Gly Ala Asp Val His Ala Lys Asp Lys Gly Gly Leu Val Pro
    610                 615                 620

Leu His Asn Ala Cys Ser Tyr Gly His Tyr Glu Val Ala Glu Leu Leu
625                 630                 635                 640

Val Lys His Gly Ala Val Val Asn Val Ala Asp Leu Trp Lys Phe Thr
                645                 650                 655

Pro Leu His Glu Ala Ala Ala Lys Gly Lys Tyr Glu Ile Cys Lys Leu
            660                 665                 670

Leu Leu Gln His Gly Ala Asp Pro Thr Lys Lys Asn Arg Asp Gly Asn
        675                 680                 685

Thr Pro Leu Asp Leu Val Lys Asp Gly Asp Thr Asp Ile Gln Asp Leu
    690                 695                 700

Leu Arg Gly Asp Ala Ala Leu Leu Asp Ala Ala Lys Lys Gly Cys Leu
705                 710                 715                 720

Ala Arg Val Lys Lys Leu Ser Ser Pro Asp Asn Val Asn Cys Arg Asp
                725                 730                 735
```

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Thr Gln Gly Arg His Ser Thr Pro Leu His Leu Ala Ala Gly Tyr Asn
            740                 745                 750

Asn Leu Glu Val Ala Glu Tyr Leu Leu Gln His Gly Ala Asp Val Asn
        755                 760                 765

Ala Gln Asp Lys Gly Gly Leu Ile Pro Leu His Asn Ala Ala Ser Tyr
    770                 775                 780

Gly His Val Asp Val Ala Ala Leu Leu Ile Lys Tyr Asn Ala Cys Val
785                 790                 795                 800

Asn Ala Thr Asp Lys Trp Ala Phe Thr Pro Leu His Glu Ala Ala Gln
                805                 810                 815

Lys Gly Arg Thr Gln Leu Cys Ala Leu Leu Leu Ala His Gly Ala Asp
            820                 825                 830

Pro Thr Leu Lys Asn Gln Glu Gly Gln Thr Pro Leu Asp Leu Val Ser
        835                 840                 845

Ala Asp Asp Val Ser Ala Leu Leu Thr Ala Ala Met Pro Pro Ser Ala
    850                 855                 860

Leu Pro Ser Cys Tyr Lys Pro Gln Val Leu Asn Gly Val Arg Ser Pro
865                 870                 875                 880

Gly Ala Thr Ala Asp Ala Leu Ser Ser Gly Pro Ser Ser Pro Ser Ser
                885                 890                 895

Leu Ser Ala Ala Ser Ser Leu Asp Asn Leu Ser Gly Ser Phe Ser Glu
            900                 905                 910

Leu Ser Ser Val Val Ser Ser Ser Gly Thr Glu Gly Ala Ser Ser Leu
        915                 920                 925

Glu Lys Lys Glu Val Pro Gly Val Asp Phe Ser Ile Thr Gln Phe Val
    930                 935                 940

Arg Asn Leu Gly Leu Glu His Leu Met Asp Ile Phe Glu Arg Glu Gln
945                 950                 955                 960

Ile Thr Leu Asp Val Leu Val Glu Met Gly His Lys Glu Leu Lys Glu
                965                 970                 975

Ile Gly Ile Asn Ala Tyr Gly His Arg His Lys Leu Ile Lys Gly Val
            980                 985                 990

Glu Arg Leu Ile Ser Gly Gln Gln  Gly Leu Asn Pro Tyr  Leu Thr Leu
        995                 1000                1005

Asn Thr  Ser Gly Ser Gly Thr  Ile Leu Ile Asp Leu  Ser Pro Asp
    1010                1015                1020

Asp Lys  Glu Phe Gln Ser Val  Glu Glu Glu Met Gln  Ser Thr Val
    1025                1030                1035

Arg Glu  His Arg Asp Gly Gly  His Ala Gly Gly Ile  Phe Asn Arg
    1040                1045                1050
```

```
Tyr Asn  Ile Leu Lys Ile Gln  Lys Val Cys Asn Lys  Lys Leu Trp
    1055                 1060                 1065

Glu Arg  Tyr Thr His Arg Arg  Lys Glu Val Ser Glu  Glu Asn His
    1070                 1075                 1080

Asn His  Ala Asn Glu Arg Met  Leu Phe His Gly Ser  Pro Phe Val
    1085                 1090                 1095

Asn Ala  Ile Ile His Lys Gly  Phe Asp Glu Arg His  Ala Tyr Ile
    1100                 1105                 1110

Gly Gly  Met Phe Gly Ala Gly  Ile Tyr Phe Ala Glu  Asn Ser Ser
    1115                 1120                 1125

Lys Ser  Asn Gln Tyr Val Tyr  Gly Ile Gly Gly Gly  Thr Gly Val
    1130                 1135                 1140

Gln Phe  Thr Lys Thr Asp Leu  Val Thr Phe Ala Thr  Ala Ala Ala
    1145                 1150                 1155

Leu Leu  Pro Gly Asn Leu Gly  Lys Val Phe Pro Ala  Val Gln Cys
    1160                 1165                 1170

Asn Glu  Asn Gly Thr Ser Pro  Pro Gly His His Ser  Val Thr Gly
    1175                 1180                 1185

Arg Pro  Ser Val Asn Gly Leu  Ala Leu Ala Glu Tyr  Val Ile Tyr
    1190                 1195                 1200

Arg Gly  Glu Gln Ala Tyr Pro  Glu Tyr Leu Ile Thr  Tyr Gln Ile
    1205                 1210                 1215

Met Arg  Pro Glu Gly Met Val  Asp Gly
    1220                 1225
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<210> 27
<211> 290
<212> PRT
<213> Homo sapiens

<400> 27

```
His Ile Gln Lys Gln Lys His Phe Asn Glu Arg Glu Ala Ser Arg Val
1               5                  10                  15

Val Arg Asp Val Ala Ala Ala Leu Asp Phe Leu His Thr Lys Gly Ile
            20                  25                  30

Ala His Arg Asp Leu Lys Pro Glu Asn Ile Leu Cys Glu Ser Pro Glu
        35                  40                  45

Lys Val Ser Pro Val Lys Ile Cys Asp Phe Asp Leu Gly Ser Gly Met
    50                  55                  60

Lys Leu Asn Asn Ser Cys Thr Pro Ile Thr Thr Pro Glu Leu Thr Thr
65                  70                  75                  80

Pro Cys Gly Ser Ala Glu Tyr Met Ala Pro Glu Val Val Glu Val Phe
                85                  90                  95
```

Thr Asp Gln Ala Thr Phe Tyr Asp Lys Arg Cys Asp Leu Trp Ser Leu
100 105 110

Gly Val Val Leu Tyr Ile Met Leu Ser Gly Tyr Pro Pro Phe Val Gly
115 120 125

His Cys Gly Ala Asp Cys Gly Trp Asp Arg Gly Glu Val Cys Arg Val
130 135 140

Cys Gln Asn Lys Leu Phe Glu Ser Ile Gln Glu Gly Lys Tyr Glu Phe
145 150 155 160

Pro Asp Lys Asp Trp Ala His Ile Ser Ser Glu Ala Lys Asp Leu Ile
165 170 175

Ser Lys Leu Leu Val Arg Asp Ala Lys Gln Lys Leu Ser Ala Ala Gln
180 185 190

Val Leu Gln His Pro Trp Val Gln Gly Gln Ala Pro Glu Lys Gly Leu
195 200 205

Pro Thr Pro Gln Val Leu Gln Arg Asn Ser Ser Thr Met Asp Leu Thr
210 215 220

Leu Phe Ala Ala Glu Ala Ile Ala Leu Asn Arg Gln Leu Ser Gln His
225 230 235 240

Glu Glu Asn Glu Leu Ala Glu Glu Pro Glu Ala Leu Ala Asp Gly Leu
245 250 255

Cys Ser Met Lys Leu Ser Pro Pro Cys Lys Ser Arg Leu Ala Arg Arg
260 265 270

Arg Ala Leu Ala Gln Ala Gly Arg Gly Glu Asn Arg Ser Pro Pro Thr
275 280 285

Ala Leu
290

<210> 28
<211> 188
<212> PRT
<213> Homo sapiens

<400> 28

Met Asn Gly Asp Asp Ala Phe Ala Arg Arg Pro Thr Val Gly Ala Gln
1 5 10 15

Ile Pro Glu Lys Ile Gln Lys Ala Phe Asp Asp Ile Ala Lys Tyr Phe
20 25 30

Ser Lys Glu Glu Trp Glu Lys Met Lys Ala Ser Glu Lys Ile Phe Tyr
35 40 45

Val Tyr Met Lys Arg Lys Tyr Glu Ala Met Thr Lys Leu Gly Phe Lys
50 55 60

Ala Thr Leu Pro Pro Phe Met Cys Asn Lys Arg Ala Glu Asp Phe Gln

65 70 75 80

Gly Asn Asp Leu Asp Asn Asp Pro Asn Arg Gly Asn Gln Val Glu Arg
85 90 95

Pro Gln Met Thr Phe Gly Arg Leu Gln Gly Ile Ser Pro Lys Ile Met
100 105 110

Pro Lys Lys Pro Ala Glu Glu Gly Asn Asp Ser Glu Glu Val Pro Glu
115 120 125

Ala Ser Gly Pro Gln Asn Asp Gly Lys Glu Leu Cys Pro Pro Gly Lys
130 135 140

Pro Thr Thr Ser Glu Lys Ile His Glu Arg Ser Gly Pro Lys Arg Gly
145 150 155 160

Glu His Ala Trp Thr His Arg Leu Arg Glu Arg Lys Gln Leu Val Ile
165 170 175

Tyr Glu Glu Ile Ser Asp Pro Glu Glu Asp Asp Glu
180 185

<210> 29
<211> 314
<212> PRT
<213> Homo sapiens

<400> 29

Met Pro Leu Glu Gln Arg Ser Gln His Cys Lys Pro Glu Glu Gly Leu
1 5 10 15

Glu Ala Arg Gly Glu Ala Leu Gly Leu Val Gly Ala Gln Ala Pro Ala
20 25 30

Thr Glu Glu Gln Glu Ala Ala Ser Ser Ser Ser Thr Leu Val Glu Val
35 40 45

Thr Leu Gly Glu Val Pro Ala Ala Glu Ser Pro Asp Pro Pro Gln Ser
50 55 60

Pro Gln Gly Ala Ser Ser Leu Pro Thr Thr Met Asn Tyr Pro Leu Trp
65 70 75 80

Ser Gln Ser Tyr Glu Asp Ser Ser Asn Gln Glu Glu Glu Gly Pro Ser
85 90 95

Thr Phe Pro Asp Leu Glu Ser Glu Phe Gln Ala Ala Leu Ser Arg Lys
100 105 110

Val Ala Glu Leu Val His Phe Leu Leu Leu Lys Tyr Arg Ala Arg Glu
115 120 125

Pro Val Thr Lys Ala Glu Met Leu Gly Ser Val Val Gly Asn Trp Gln
130 135 140

Tyr Phe Phe Pro Val Ile Phe Ser Lys Ala Ser Ser Ser Leu Gln Leu
145 150 155 160

```
Val Phe Gly Ile Glu Leu Met Glu Val Asp Pro Ile Gly His Leu Tyr
                165                 170                 175

Ile Phe Ala Thr Cys Leu Gly Leu Ser Tyr Asp Gly Leu Leu Gly Asp
            180                 185                 190

Asn Gln Ile Met Pro Lys Ala Gly Leu Leu Ile Ile Val Leu Ala Ile
        195                 200                 205

Ile Ala Arg Glu Gly Asp Cys Ala Pro Glu Glu Lys Ile Trp Glu Glu
    210                 215                 220

Leu Ser Val Leu Glu Val Phe Glu Gly Arg Glu Asp Ser Ile Leu Gly
225                 230                 235                 240

Asp Pro Lys Lys Leu Leu Thr Gln His Phe Val Gln Glu Asn Tyr Leu
                245                 250                 255

Glu Tyr Arg Gln Val Pro Gly Ser Asp Pro Ala Cys Tyr Glu Phe Leu
            260                 265                 270

Trp Gly Pro Arg Ala Leu Val Glu Thr Ser Tyr Val Lys Val Leu His
        275                 280                 285

His Met Val Lys Ile Ser Gly Gly Pro His Ile Ser Tyr Pro Pro Leu
    290                 295                 300

His Glu Trp Val Leu Arg Glu Gly Glu Glu
305                 310

<210>  30
<211>  180
<212>  PRT
<213>  Homo sapiens

<400>  30

Met Gln Ala Glu Gly Arg Gly Thr Gly Gly Ser Thr Gly Asp Ala Asp
1               5                   10                  15

Gly Pro Gly Gly Pro Gly Ile Pro Asp Gly Pro Gly Gly Asn Ala Gly
            20                  25                  30

Gly Pro Gly Glu Ala Gly Ala Thr Gly Gly Arg Gly Pro Arg Gly Ala
        35                  40                  45

Gly Ala Ala Arg Ala Ser Gly Pro Gly Gly Gly Ala Pro Arg Gly Pro
    50                  55                  60

His Gly Gly Ala Ala Ser Gly Leu Asn Gly Cys Cys Arg Cys Gly Ala
65                  70                  75                  80

Arg Gly Pro Glu Ser Arg Leu Leu Glu Phe Tyr Leu Ala Met Pro Phe
                85                  90                  95

Ala Thr Pro Met Glu Ala Glu Leu Ala Arg Arg Ser Leu Ala Gln Asp
            100                 105                 110

Ala Pro Pro Leu Pro Val Pro Gly Val Leu Leu Lys Glu Phe Thr Val
        115                 120                 125
```

Ser	Gly	Asn	Ile	Leu	Thr	Ile	Arg	Leu	Thr	Ala	Ala	Asp	His	Arg	Gln
	130					135					140				
Leu	Gln	Leu	Ser	Ile	Ser	Ser	Cys	Leu	Gln	Gln	Leu	Ser	Leu	Leu	Met
145					150					155					160
Trp	Ile	Thr	Gln	Cys	Phe	Leu	Pro	Val	Phe	Leu	Ala	Gln	Pro	Pro	Ser
				165					170					175	
Gly	Gln	Arg	Arg												
			180												

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